



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,353	03/05/2002	Ioannis Katsavounidis	INTV.007A	7737
4586	7590	11/01/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			VO, TUNG T	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,353

Applicant(s)

KATSAVOUNIDIS ET AL.

Examiner

Tung Vo

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 11 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 6-10 and 12-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/11/2005 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 6-7 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kikuchi et al. (US 6,571,361).

Re claims 6-7 and 13-14, Kikuchi discloses a method of decoding a video bitstream (fig. 8) that includes forward error correction (FEC) codes (802 of fig. 8), the method comprising the step of:

receiving the video bitstream (205' of fig. 8), which includes video data (801 of fig. 8; Note CODE STRING) , FEC codes (802 of fig. 8; Note FEC IDENTIFYING SIGNAL)

Art Unit: 2613

corresponding to a subset of the video data (CHK1, MODE, MV, COEF of fig. 4) and a header code (PH of fig. 4) that specifies the subset of video data to which one or more the FEC codes correspond (col. 14, lines 21-54), the subset of video data being one of motion vectors (MV of fig. 4), DC coefficients (COEF of fig. 4), and header information (see also fig. 11);

retrieving video data from the video bitstream (800 of fig. 8);

evaluating the video data determine the presence of a corrupt portion (error) thereof (804 of fig. 8) and determining if the corrupt portion of video data corresponds to the subset data corresponding to the FEC codes (903 of fig. 9; col. 19, line 10-col. 20, line 37);

retrieving at least one of the FEC codes from the video bitstream as specified by the header code responsive of a correspondence of the corrupt portion of the video data with FEC code portion in the video data evaluating step (904 of fig. 9; col. 21, line 39-col. 22, line 16);

correcting the corrupt portion of the video data in accordance with the at least one of FEC codes to recover uncorrupted video data therefrom (904, 915 of fig. 9);

wherein the FEC code correspond to Bose-Chaudhuri-Hocquenghem (BCH) codes (col. 1, lines 28-30).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,571,361) in view of Chien et al (US 5,621,467).

Re claim 12, Kikuchi does not particularly teach the step of concealing an error in a corresponding pixel with a gray color pixel when the portion of the video data cannot be recovered in the video data correcting step as claimed.

However, Chien further teaches the step of concealing an error in a corresponding pixel (col. 3, lines 48-61, e.g. the error concealment conceal an error in a corresponding to a single component such as luminance, chrominance, color, or gray color pixel...) with a gray color pixel when the portion of the video data cannot be recovered in the video data correcting step.

Therefore, taking the teachings of Kikuchi and Chien as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the error concealment of Chien into the method of Kikuchi to permit of a very advantageous trade off between generating high resolution replacement blocks and blocks with reduced artifacts in the presence of motion.

Doing so would allow the method to minimize the errors during decoding process is performed.

6. Claims 8, 10, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,571,361) in view of Watanabe (US 6,310,897 B1).

Re claim 8, 10, 15, and 17, Kikuchi further teaches a buffer as a transmission/storage medium (col. 22, lines 14-19) for storing the coded string, wherein the input decoding unit (800 of fig. 8) receives and retrieves code string, FEC kind identifying signal synchronization code detection signal, and error detection signal (801-804 of fig. 8), wherein a case where the

Art Unit: 2613

transmission/storage is carried out by dividing into packets or cells at intervals determined in a transmission line or a storage medium.

It is noted that Kikuchi does not particularly teach the packet for a video object plane and a user data video packet associated with the VOP as claimed.

However, Watanabe teaches the packet for a video object plane (VOP header; fig. 14A and a user data video packet associated with the VOP (VOP header is user video packet header; 306 of fig. 7, wherein the user would insert designation information into the VOP header).

Therefore, taking the teachings of Kikuchi and Watanabe as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Watanabe into the Kikuchi for to minimize the possibility of propagation of an error which cannot be corrected. Doing so would provide the quality of the decoded picture therefore improves.

7. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US 6,571,361) in view of Watanabe (US 6,310,897 B1) as applied to claims 6 and 13, and further in view of Fuji et al. (US 6,807,191 B2).

Re claims 9 and 16, the combination of Kikuchi and Watanabe teaches the buffer for storing the video data above but it does not particularly teach the buffer is a ring buffer as claimed.

However, Fuji teaches the buffer is a ring buffer for storing the video data (fig. 6). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the ring

Art Unit: 2613

buffer (fig. 6) of Fuji into the decoder of the combination of Kikuchi and Watanabe to easily read and write the video data the video data for decoding.

Doing so would allow the user to read or write a particular amount of the video data from or onto the ring buffer in the desired location or address.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Heinzelman et al. (US 6,754,277 B1) discloses an error protection for compressed video.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tung Vo
Primary Examiner
Art Unit 2613